CAMOSUN COLLEGE	***School of Arts & Science*** ***MATHEMATICS DEPARTMENT*** **MATH 101-01** **Calculus 2** **2006F**

COURSE OUTLINE

The Approved Course Description is available on the web @ _____

Ω *Please note: this outline will be electronically stored for five (5) years only. It is strongly recommended students keep this outline for your records.*

1. Instructor Information

(a)	Instructor:	George Ballinger		
(b)	Office Hours:	9:30 – 10:20 M-F		
(c)	Location:	Ewing 256		
(d)	Phone:	(250) 370-3116	Alternative Phone:	
(e)	Email:	ballinger@camosun.bc.ca		
(f)	Website:	ballinger.disted.camosun.bc.ca (click the Math 101 link for course information)		

2. Intended Learning Outcomes

(No changes are to be made to this section, unless the Approved Course Description has been forwarded through EDCO for approval.)

Upon completion of this course the student will be able to:

1. Differentiate and integrate inverse trigonometric, hyperbolic and inverse hyperbolic functions.
2. Use integration to find area, volume, arc length, surface area of revolution, work, moments and centroids.
3. Integrate using parts, trigonometric integrals, trigonometric substitution, partial fractions and tables.
4. Evaluate limits, which have indeterminate forms, and calculate improper integrals.
5. Test a sequence for convergence and explain the difference between convergence of a sequence and convergence of a series.
6. Test series for convergence using the integral test, p-test, comparison tests, alternating series test and ratio test and explain the difference between convergence and absolute convergence.
7. Estimate the error in approximating a series using improper integrals and the alternating series remainder.
8. Calculate Taylor polynomials, power series, Taylor series, and MacLaurin series and estimate the error in an approximation using Taylor's Theorem.
9. Determine the interval of convergence of a power series.
10. Graph and analyze parametric curves and find arc length and surface area in parametric form.

11. Graph and analyze curves given in polar coordinates and determine area and arc length in polar form.

3. Required Materials

(a)	Texts	R.E. Larson, R.P. Hostetler and B.H. Edwards, *Calculus of a Single Variable,* Eighth Edition, Houghton Mifflin Co., Boston, 2006.
(b)	Other	

4. Course Content and Schedule

(Can include: class hours, lab hours, out of class requirements and/or dates for quizzes, exams, lectures, labs, seminars, practicums, etc.)

Chapter	Sections		
	Ch. 5	Logarithmic, Exponential, and other Transcendental Functions	5.6-5.8
	Ch. 7	Applications of Integration	7.1-7.6
	Ch. 7	Integration Techniques, L'Hôpital's Rule, and Improper Integrals	8.1-8.8
	Ch. 8	Infinite Series	9.1-9.10
	Ch. 9	Conics, Parametric Equations, and Polar Coordinates	10.1-10.5

A&S Math Lab: Ewing 224 (phone: 370-3503): This drop-in centre is freely available for your use to work on math homework and to seek help from the tutor on staff (see hours posted on door).

Calculator Policy: As per Math Department policy, the only calculator permitted for use on tests and the final exam is the Sharp EL-531W scientific calculator. No other make/model of calculator is permitted, nor are other electronic devices such as cell phones, PDAs, laptop computers, electronic translators, etc.

Study Time: It is recommended that approximately 10 hours per week be spent studying for this course outside of class time.

Homework: There will be nine assignments to be handed in for marking, details for which will be posted on the course website. LATE ASSIGNMENTS WILL NOT BE ACCEPTED.

5. Basis of Student Assessment (Weighting)

(Should be linked directly to learning outcomes.)

There will be four term tests, details for which will be posted on the course website.

Grade Calculation: The final grade will be calculated according to the following breakdown:

Assignments:	16%*
Term Tests:	34%
Comprehensive 3-hour Final Exam:	50% (or 100%)**

* *Note:* The lowest assignment mark from among the first eight assignments will be dropped when calculating the assignment average. With the exception of the ninth assignment, which must be handed in by the due date, this allows you to miss one assignment without penalty.

** *Note:* If your final exam mark is higher than your term mark (which consists of the assignments and term tests) AND your term mark is at least 50%, then your course mark will be based entirely on your final exam mark.

6. Grading System

(No changes are to be made to this section, unless the Approved Course Description has been forwarded through EDCO for approval.)

Standard Grading System (GPA)

Percentage	Grade	Description	Grade Point Equivalency
95-100	A+		9
90-94	A		8
85-89	A-		7
80-84	B+		6
75-79	B		5
70-74	B-		4
65-69	C+		3
60-64	C		2
50-59	D		1
0-49	F	Minimum level has not been achieved.	0

A grade of **D** is considered a pass; however, a grade of at least **C** is required when this course is used as a prerequisite for entry into Math 220 or any other Camosun course. A grade of **D** may be used but is not recommended for entry into Math 200 at UVic, assuming their overall admission requirements for entry into 2nd year have been met.

Temporary Grades

Temporary grades are assigned for specific circumstances and will convert to a final grade according to the grading scheme being used in the course. See Grading Policy at **camosun.ca** or information on conversion to final grades, and for additional information on student record and transcript notations.

Temporary Grade	Description
I	*Incomplete*: A temporary grade assigned when the requirements of a course have not yet been completed due to hardship or extenuating circumstances, such as illness or death in the family.
IP	*In progress*: A temporary grade assigned for courses that are designed to have an anticipated enrollment that extends beyond one term. No more than two IP grades will be assigned for the same course.
CW	*Compulsory Withdrawal:* A temporary grade assigned by a Dean when an instructor, after documenting the prescriptive strategies applied and consulting with peers, deems that a student is unsafe to self or others and must be removed from the lab, practicum, worksite, or field placement.

Temporary grades are assigned for specific circumstances and will convert to a final grade according to the grading scheme being used in the course. See Grading Policy E-1.5 at **camosun.ca** for information on conversion to final grades, and for additional information on student record and transcript notations.

7. Recommended Materials or Services to Assist Students to Succeed Throughout the Course

LEARNING SUPPORT AND SERVICES FOR STUDENTS

There are a variety of services available for students to assist them throughout their learning. This information is available in the College calendar, at Student Services or the College web site at camosun.ca.

STUDENT CONDUCT POLICY

There is a Student Conduct Policy **which includes plagiarism**.
It is the student's responsibility to become familiar with the content of this policy. The policy is available in each School Administration Office, at Student Services and on the College web site in the Policy Section.

ADDITIONAL COMMENTS AS APPROPRIATE OR AS REQUIRED